



George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama 35812

FPD-OI-FD43.1
October 7, 2002

ORGANIZATIONAL INSTRUCTION

Flight Projects Directorate Ground Systems Department FD40

Ground Systems Operations

Revision D

APPROVAL

NAME
Original Signed by

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TITLE
Manager, Ground
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Group

ORG
FD43

DATE
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CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

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DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		9/14/99	Baseline version
Revision	Rev. A	3/14/01	Document reformatted to Flight Projects Directorate standard template.
Revision	Rev. B	5/24/01	2.0 Additional documents for reference. 3.0 Additionl acronym
Revision	Rev. C	11/15/01	4.9 and 4.11 were updated to reflect current process force due to budget cuts
Revision	Rev. D	10/7/02	2.0 and 8.0 were reformatted and updated to reflect current information.

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1.0 GENERAL INFORMATION

1.1 Scope

This instruction defines the phases of the lifecycle for Ground Systems Operations (O&M) deliverables.

1.2 Purpose

To provide a step-by-step process leading to certification and utilization of Ground Systems Operations products required to support an activity (i.e., mission, simulation, increment and/or test).

1.3 Applicability

This OWI applies for all Mission Operations.

2.0 APPLICABLE DOCUMENTS

HOSC-EHS-1650	Using the HOSC Application Software
HOSC-HDBK-003	HOSC Facility Document
HOSC-HUH-233	HOSC User Handbook
HOSC-PLAN-009	HOSC Contingency Plan
HOSC-PLAN-209	IST Training Plan
HOSC-PLAN-623	HOSC Project Plan
HOSC-PLAN-661	HOSC Quality Plan
HOSC-PROC-180	HOSC Standard Operation Procedures
HOSC-SOP-182	Data System Standard Operating Procedures
MPG 1280.7	Servicing
MSFC-PLAN-904	HOSC Functional Requirements & Implementation Plan
MSFC-PLAN-2729	HOSC Operations & Maintenance Plan
MSFC-PLAN-2934	HOSC Emergency and Disaster Recovery Plan
MSFC-PROC-1933	HOSC Access Procedures
MSFC-RQMT-2436	EMCS Level A Requirements
MSFC-RQMT-2437	EMCS Video Distribution System Subsystem Requirements Document
MSFC-RQMT-2580 Vol. I	EMCS Subsystem Design Document Volume 1: Data System
MSFC-RQMT-2580 Vol. II	EMCS Subsystem Design Document Volume 2: Communication Status
	Monitoring and Control System
UMS-HOCD-004	HOSC Configuration Document

3.0 ACRONYMS and DEFINITIONS

3.1 Acronyms

EHS	Enhanced HOSC System
EMCS	Enhanced Mission Communication Services
HOSC	Huntsville Operations Service Center
ISS	International Space Station
O&M	Operations and maintenance
POIC	Payload Operation Integration Center
PCD	Payload Operations Integration Center (POIC) Capabilities Document

3.2 Definitions

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None

4.0 INSTRUCTIONS

4.1 Define Phase

Operations and Maintenance (O&M) defines the services and deliverables needed from the requirement documentation.

- 4.1.1 Contractor uses the MSFC Plan 904 baseline information
- 4.1.2 O&M helps to produce schedule templates.

RESPONSIBLE PARTY: Mission Systems Operations Group Lead Assisted by Contractor

4.2 Analyze Phase

O&M analyzes the impact of the Design Phase on capabilities and service agreements. Contractor provides the following:

- 4.2.1 Plans & Directions
- 4.2.2 O&M Plan
- 4.2.3 ISS POIC Capabilities Documentation (PCD)(updates)

RESPONSIBLE PARTY: Mission Systems Operations Group Lead Assisted by Contractor

4.3 Review Plans

Plans, directions, etc., are reviewed to confirm there is no violation of O&M Plan or PCD.

- 4.3.1 If a violation occurs, the pertinent matter is referred back to the Analyze Phase.
- 4.3.2 If no violation occurs, the program continues to the Design Phase with authority to proceed.

RESPONSIBLE PARTY: Mission Systems Operations Group Lead Assisted by Contractor

4.4 Design Phase

Mission Systems Operations Group Lead authorizes contractor to update and/or create documentation needed for operation and maintenance of the Facility with support from Ground Systems personnel. Contractor delivers documentation to Mission Systems Operations Group and comments/feedback are incorporated. Documentation includes, but is not limited to:

- 4.4.1 Data System Standard Operating Procedures
- 4.4.2 HOSC User Handbook
- 4.4.3 Generic Remote Operations Procedures
- 4.4.4 HOSC Contingency Plan
- 4.4.5 HOSC Configuration Document
- 4.4.6 HOSC Facility Document
- 4.4.7 EHS Users Guides
- 4.4.8 HOSC Standard Operation Procedures

RESPONSIBLE PARTY: Contractor's O&M Manager assisted by Mission Systems Operations Group personnel

4.5 Documentation Delivery

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Contractor delivers final documentation to MSFC Repository.

RESPONSIBLE PARTY: Contractor's O&M Manager

4.6 Certification Phase

The contractor trains and certifies the necessary operation's personnel and certifies their procedures.

RESPONSIBLE PARTY: Contractor's O&M Manager

4.7 Personnel/Procedure Certification Review

Certification of personnel and procedures are confirmed by the contractor with the concurrence of the Mission Systems Operations Group Lead. The contractor follows the plans in the IST Training Plan and the O&M Plan.

4.7.1 Any personnel and/or procedures that fail certification are referred back to the training/certification process (4.6).

4.7.2 Certified personnel and procedures progress to the next phase.

RESPONSIBLE PARTY: Mission Systems Operations Group Lead & Contractor O&M Manager

4.8 Flight Certification Memo

Mission Systems Operations Group Lead submits a memo of facility and IST readiness to the POIF lead per flight, in line with [FPD-OI-FD40.4](#) Flight Certification for Ground Systems

RESPONSIBLE PARTY: Mission Systems Operations Group Lead

4.9 Utilization Phase

Servicing begins. The contractor delivers all defined O&M services and provides performance and utilization metrics monthly per ISS program and upper management requests.

RESPONSIBLE PARTY: Contractor with support from Mission Systems Operations Group Lead

4.10 Readiness Status

The contractor presents facility and system readiness to management, the POIF, and users using the Standard Operating Procedures (HOSC-PROC-180) for HOSC Readiness Reviews. After the flight or activity, the contractor presents the mission/increment/activity debrief to the HOCG detailing all problems from the activity. These problems are documented in an Incident Report that is later developed into an HPR if not resolved in real-time to ensure closure. See [FD-OI-FD40.10](#) HOSC Problem Report.

Marshall Operations has the lead to ensure the problems are corrected and to analyze the cause of the problems. These issues are reported back to the Ground Systems Operations Manager.

RESPONSIBLE PARTY: Contractor with support from Mission Systems Operations Group Lead

4.11 Survey

The HOSC Support Desk (544-5066) and/or Mission System Operations survey users at the end of major missions/Increments or per the Mission Systems Operations Group Lead's request. The Mission Systems Operations Group Lead reviews the survey results and assigns actions accordingly per user inputs. Status is brought to the Management Review Group meetings.

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RESPONSIBLE PARTY: Mission Systems Operations Group Lead & Contractor O&M Manager

5.0 NOTES

None

6.0 SAFETY PRECAUTIONS AND WARNING NOTES

None

7.0 APPENDICES, DATA, REPORTS, AND FORMS

None

8.0 QUALITY RECORDS

The table below lists the Quality Records for this Organizational Instructional.

Record Title	Description of Record	Authority	Retention	Notes
IST Personnel Certification	O&M Team trainers collect training statistics from each position	FPD-OI-FD40.4	Destroy when no longer needed for reference.	Storage is in a file cabinet in MSFC Building 4663, A179
IST Procedures Certification	O&M provides status of procedures written and remaining	FPD-OI-FD40.4	Destroy when no longer needed for reference.	Storage is in a file cabinet in MSFC Building 4663, A179
HOSC Readiness Review	Marshall Ops Lead provides readiness status of facility and systems	FPD-OI-FD40.4	Handle as permanent pending retention approval.	Storage is in a file cabinet in MSFC Building 4663, A179
HOSC User Surveys Metrics	HOSC Support Desk collects paper surveys after events	MPG 1280.7	Destroy when 2 years old.	Storage is in a file cabinet in MSFC Building 4663, A179
Management Metrics Package	O&M status of HCRs, IRs, system utilization, and critical service outages for the month	MPG 1280.7	Destroy when no longer needed for reference.	Storage is in a file cabinet in MSFC Building 4663, A179

9.0 TOOLS, EQUIPMENT, AND MATERIALS

None

10.0 PERSONNEL TRAINING AND CERTIFICATION

None

11.0 FLOW DIAGRAM

Figure 1 graphically depicts the procedure stated in Section 4.0 of this document.

FIGURE 1: Ground Systems Operations Flow Diagram

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